

DETAILED ACTION

1. This application is in condition for allowance except for the following formal matters: The Administrative Requirement as set forth below.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 25 USPQ 74, 453 O.G. 213, (Comm'r Pat. 1935).

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

2. As the application has prosecution closed on the merits, Applicant is now required to make the submission to comply with the Administrative Requirement. Applicants' compliance will take the form of one of the following actions:

(1) Filing terminal disclaimers in each of the related co-pending applications terminally disclaiming each of the other co-pending applications;

(2) Providing an affidavit attesting to the fact that all claims in the co-pending applications have been reviewed by Applicant and that no conflicting claims exist between the applications; or

(3) Resolving all conflicts between claims in the identified co-pending applications by identifying how all the claims in the instant application are distinct and separate inventions from all the claims in the identified co-pending applications.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Thomas J. Scott, Jr. (Reg. No. 27,836) on 10/28/09 and a subsequent facsimile communication on 11/12/09.

The application has been amended as follows:

Claim 4 (Currently Amended) A method of processing signals in a network, comprising the steps of:

receiving an information transmission to be transmitted;

receiving an instruct signal which is effective ~~to one of~~:

~~(a) effect at~~ a transmitter station to generate at least a first message that is effective to enable a receiver station to control the reception or presentation of television programming, select and output portions of said information transmission to a plurality of processors at said receiver station based on control information in said first message, process said portions of said information transmission simultaneously at said plurality of processors and meter or monitor the availability, use or usage of said television programming or said at least a first message; and

~~(b) effect a first receiver station to generate at least a first message that is effective to enable a second receiver station to control the reception or presentation of television programming and meter or monitor the availability, use or usage of said television programming or said at least a first message;~~

receiving a transmitter control signal which operates at ~~one of~~ said transmitter station ~~and said first receiver station~~ to communicate said at least a first message to a transmitter; and

transmitting said information transmission, and ~~said instruct signal and said transmitter control signal~~ first message.

Claim 6 (Currently Amended) The method of claim 5, further comprising the step of programming said control processor to compare information stored in at least a first ~~of said at least one~~ register memory with control function invoking information.

Claim 7 (Currently Amended) The method of claim 6, further comprising the step of programming said control processor to compare information stored in at least a second ~~of said at least one~~ register memory with information that identifies a length or format of at least a portion of said at least one message.

Claim 8 (Currently Amended) The method of claim 2, wherein ~~said at least one a~~ register memory includes an input signal register memory ~~and said step of selecting control information in said inputted first portion of said selected at least one message and communicating said selected control information to a plurality of registers memories comprises~~ further comprising the steps of:

communicating said at least a first portion of said selected at least one message to said input signal register memory;

selecting information at said input signal register memory to compare or communicate; and

communicating said control information to at least a second ~~of said at least one~~ register memory.

Claim 15 (Currently Amended) The method of claim 14, further comprising the steps of:

programming said control processor with comparison information to serve as a basis for determining the length or format of said at least one ~~segment~~ message of said message stream; and

programming said control processor to compare information stored at said at least one register memory to said comparison information.

Claim 18 (Currently Amended) The method of claim 17, wherein said ~~first~~ control processor performs at least one of (1) converting information detected in said message stream based on protocols and (2) assembling processor code based on information detected in said message stream, said ~~message~~ method further comprising the step of communicating machine language code to said second processor in said selected other portions of said message stream.

Claim 23 (Currently Amended) The method of claim 19, further comprising the steps of:

storing a decrypted portion of said at least some of said message stream at ~~some or all of said at least one~~ a register memory; and
processing decrypted portions of said message stream simultaneously.

Claim 26 (Currently Amended) The method of claim 25, ~~wherein~~ further comprising the ~~step~~ steps of:

storing at least a portion of said standard at one or more of a Standard Word and a Standard Length memory; and

programming said receiver station to compare data received in said information transmission to information included at said one or more of a Standard Word and a Standard Length memory.

Claim 27 (Currently Amended) The method of claim 25, wherein said receiver station identifies, based on said standard, one of (1) an end of a prior message and (2) a header in said selected at least one message.

Claim 33 (Currently Amended) The method of claim 32, wherein said receiver station includes a speaker and a second of said plurality of processors generates an audio signal including audio to be emitted as part of said television programming, said method further comprising the step of outputting to said second processor a second of said selected other portions of said message stream which causes ~~which causes~~ said second processor to communicate said audio signal to said speaker.

Claim 36 (Currently Amended) The method of claim 35, wherein said second processor code programs said control processor to select control information in said message stream and communicate said selected control information to ~~said at least one~~ a register memory, said method further comprising the step of processing control information of a new composition and/or length in accordance with said second processor code.

Claim 47 (Currently Amended) The method of claim 41, further comprising the step of transmitting an instruction which operates at said receiver station to control at least one of said plurality of ~~processor~~ processors to select a second processor to be interrupted.

Claim 57 (Currently Amended) A method of television or video signal processing at a television or video receiver, said television or video receiver having a plurality of processors, comprising the steps of:

(1) receiving an information transmission, said information transmission including a message stream;

(2) receiving a control signal which operates at a transmitter station to communicate said information transmission to a transmitter; and

(3) transmitting said message stream, said message stream enabling said receiver station to select control information in said message stream, compare said

control information to a stored function invoking datum, input selected digital television or digital video signals to said plurality of processors on the basis of one or more matches of said control information to said stored function invoking datum, simultaneously process said selected digital television or digital video signals at two or more of said plurality of processors, and display television programming or video information included in said selected digital television or digital video signals ~~on the basis of said comparison of said control information to said stored function invoking datum.~~

Claim 58 (Currently Amended) A method of television or video signal processing at a television or video receiver, said television or video receiver having a plurality of processors, comprising the steps of:

- (1) receiving an information transmission including a message stream; and
- (2) causing said message stream to be communicated to a transmitter at a specific time, thereby to transmit said message stream, said message stream enabling said receiver station to select control information in said message stream, compare said control information to a stored function invoking datum, input selected digital television or digital video signals to said plurality of processors on the basis of one or more matches of said control information to said stored function invoking datum, simultaneously process said selected digital television or digital video signals at two or more of said plurality of processors, and display television programming or video

information included in selected digital television or digital video signals ~~on the basis of said comparison of said control information to said stored function invoking datum.~~

Claim 65 (Currently Amended) The method of claim 56, wherein ~~said a~~ digital switch communicates at least some of said digital television signals to said plurality of processors, said method further comprising the step of communicating said at least some of said ~~message stream~~ digital television signals from said at least one register memory to at least one of said digital switch and ~~a second one~~ one of said plurality of processors.

Claim 71 (Currently Amended) The method of claim 70, wherein said first processor performs one of (1) converting information detected in said ~~message stream~~ information transmission based on protocols and (2) assembling processor code based on data detected in at least a first portion of said information transmission, said ~~message~~ method further comprising the step of communicating machine language code to said second processor based on data detected in at least a second portion of said information transmission.

Claim 73 (Currently Amended) The method of claim 72, wherein said control processor controls a decryptor to decrypt at least some of said digital television signals, said method further comprising the step of controlling a digital switch to communicate

said at least some of said digital television signals to or from said decryptor in accordance with said cadence information.

Claim 75 (Currently Amended) The method of claim 73, wherein said cadence information is detected in a message stream, said method further comprising the steps of:

storing a decrypted portion of ~~said at least some of~~ said message stream at said at least one register memory; and
processing decrypted portions of said message stream simultaneously.

Claim 86 (Currently Amended) The method of claim 57, further comprising the steps of:

receiving said information transmission at a signal generator operatively connected to said transmitter;

generating first cadence information which is effective at said receiver station to execute a predetermined instruction and at least one message element including one or more instructions to be directed to a specific one of said plurality of processors; and

embedding said cadence information and said at least one message element in said information transmission before communicating said information transmission to said transmitter.

Claim 87 (Currently Amended) The method of claim 86, wherein said specific processor includes at least one register memory, said method further comprising the ~~steps~~ step of: communicating to said signal generator second cadence information which operates at said at least one register memory to select or identify said control information.

Claim 107 (Currently Amended) A method of processing signals at a receiver station, said receiver station having a plurality of processors, said method comprising the steps of:

(a) receiving a broadcast or cablecast information transmission at a transmission station;

(b) generating a message that is effective to enable said receiver station to output selected portions of said message to said plurality of processors, to process said selected portions simultaneously, to select a processor from said plurality of processors to interrupt on the basis of control information included in said message; (c) ~~at least one of communicating and responding to~~ communicate a processor interrupt ~~on the basis of the content of a flag memory;~~ (d) ~~controlling to said selected processor and to control~~ apparatus presenting media programming based on said processor interrupt the content of a flag memory; and

(e) transmitting said message.

Claim 108 (Currently Amended) A method of processing signals in a network, said method comprising the steps of:

- (a) receiving a broadcast or cablecast information transmission;
- (b) receiving an instruct signal ~~which performs at least one of:~~

~~(i) effecting effective at~~ a transmitter station to generate a first message ~~of a~~ message stream that is effective to enable a remote receiver station to: (1) output selected portions of said message stream to a plurality of processors, (2) process said selected portions simultaneously, (3) select a processor from a said plurality of processors to interrupt on the basis of control information included in said first message, ~~(2)~~ (4) at least one of communicate and respond to a processor interrupt on the basis of the content of a flag memory, and ~~(3)~~ (5) control apparatus presenting media programming based on said processor interrupt; ~~and~~

~~(ii) effecting a receiver station to generate a second message that is effective to enable a remote receiver station to: (1) select a processor from a plurality of processors to interrupt on the basis of control information included in said second message, (2) at least one of communicate and respond to a processor interrupt on the basis of the content of a flag memory, and (3) control apparatus presenting media programming;~~

(c) receiving a transmitter control signal which operates at said transmitter station to communicate ~~at least one of said instruct signal and~~ said first message to a transmitter; and

(d) transmitting said information transmission, ~~said transmitter control signal, and~~ said ~~at least one of said instruct signal~~ and said first message.

Claim 114 (Currently Amended) The method of claim 109, further comprising the step of communicating at least one of said other portions of said message stream to ~~said an~~ input signal register memory included in said plurality of dedicated register memories.

Claim 115 (Currently Amended) The method of claim 114, further comprising the step of communicating said at least one of said other portions of said message stream from said input signal register memory to at least one of said digital switch and ~~a second~~ one of said plurality of processors.

Claim 116 (Currently Amended) The method of claim 109, wherein said control processor receives said at least a first portion of said message from a first of said plurality of processors, said method further comprising the step of controlling said digital switch to communicate one or more other portions of said message stream to ~~a second~~ one of said plurality of processors.

Claim 118 (Currently Amended) The method of claim 109, wherein said control processor controls a decryptor to decrypt at least some of said at least one message, said method further comprising the step of controlling said digital switch to communicate said at least some of said at least one message to or from said decryptor.

Claim 119 (Currently Amended) The method of claim 118, further comprising the steps of:

Storing a decrypted portion of said at least some of said at least one message at some of said plurality of dedicated register memories; and processing decrypted portions of said message stream simultaneously.

Claim 122 (Currently Amended) The method of claim 120, wherein said receiver identifies, based on said standard, at least one of (1) an end of a prior message and (2) a header in said selected at least one message.

Claim 125 (Currently Amended) The method of claim 124, wherein said television receiver includes a speaker and information included in said message stream controls a second of said plurality of processors to ~~generates~~ generate an audio signal including audio to be emitted as part of said television programming, said method further comprising the step of causing at least one of said control processor and said digital switch to communicate to said second processor a second signal which causes said second processor to communicate said audio signal to said speaker.

Claim 127 (Currently Amended) The method of claim 109, wherein said at least one of said other portions of said message stream includes first processor code addressed to a processor that generates information content of a video or audio signal, said method further comprising the steps of:

Inputting to said control processor second processor code received in said selected at least one message; and

Communicating, in accordance with said second processor code, said at least one of said other portions of said message stream to said processor that generates said information content.

Claim 129 (Currently Amended) A method of video signal processing at a video receiver, said video receiver having a plurality of processors, said method comprising the steps of:

receiving an information transmission including a digital video signal and a message stream;

detecting said message stream in said information transmission;

selecting at least one message of said detected message stream;

inputting at least a portion of said selected at least one message to a control processor;

selecting control information in said inputted portion of said selected at least one message and communicating said selected control information to at least one dedicated register memory;

controlling a digital switch on the basis of a plurality of comparisons at said at least one dedicated register memory;

outputting selected portions of said message stream to said plurality of processors;

processing said selected portions of said message stream simultaneously; and controlling the reception or presentation of video in accordance with said at least one message.

Claim 131 (Currently Amended) A method for an origination station or intermediate transmission station to control television or video signal processing at a television or video receiver, said television or video receiver having a plurality of processors, said method comprising the steps of:

(4) receiving an information transmission, said information transmission including a message stream;

(2) receiving a control signal which operates at a transmitter station to communicate said information transmission to a transmitter; and

(3) transmitting said message stream, said message stream to effect said receiver ~~station~~ to select a portion of at least one message from said message stream and control the ~~reception~~ or presentation of television programming or video information in accordance with said at least one message by selecting and outputting portions of said information transmission to said plurality of processors based on control information in said at least one message and processing said portions of said information transmission simultaneously at said plurality of processors.

Claim 132 (Currently Amended) The method of claim 131, wherein said step of receiving an information transmission is at a signal generator operatively connected to said transmitter, and further comprising the steps of:

generating first cadence information which is effective at said receiver station to execute a predetermined instruction and at least one message element including one or more instructions to be directed to a specific at least one of said plurality of processors; and

embedding said cadence information and said at least one message element in said information transmission before communicating said information transmission to said transmitter.

Claim 133 (Currently Amended) The method of claim 132, wherein said specific processor includes a plurality of dedicated register memories, said method further comprising the step of:

Communicating to said signal generator second cadence information which operates at said a plurality of dedicated register memories to select said portion of at least one message.

Claim 134 (Currently Amended) A method for an origination station or intermediate transmission station to control processing of signals in a television or video receiver, said television or video receiver having a plurality of processors, said method comprising the steps of:

(1) receiving an information transmission, including a message stream; and
(2) causing a portion of said message stream to be communicated to a transmitter at a specific time, thereby to transmit said portion of said message stream, said portion of said message stream to effect said receiver station to control the ~~reception or~~ presentation of some television programming or video information in accordance with said message portion by selecting and outputting portions of said information transmission to said plurality of processors based on control information in said portion of said message stream and processing said portions of said information transmission simultaneously at said plurality of processors.

Information Disclosure Statement

3. The information disclosure statements (IDS) submitted on 5/11/01, 3/21/02, 6/18/02, 3/14/03, and 5/5/03 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Allowable Subject Matter

4. Claims **2-30, 32-36, 41, 42, 47, 48, 56-89, 96, 97, 106-116, and 118-134** are allowable over the prior art of record.

5. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim **2**, the closest prior art, *Yanagimachi et al.* (U.S. 3,936,595), teaches a system for distribution of programming to a subscribing receiver device, where control signaling is provided from the transmitter end to the receiver end such

that desired programming may be extracted from a program stream by the receiver in a desired sequence for subsequent display to a subscriber.

However, *Yanagimachi et al.* as well as the other prior art of record fails to teach "selecting and outputting under the control of said control processor, other portions of said message stream to said plurality of processors, based on said control information; processing said selected other portions of said message stream simultaneously at said plurality of processors" and "controlling the timing of communicating television programming in accordance with said message stream" in combination with the other limitations of claim **2**.

Regarding claims **5-30 and 32-36**, these claims are further limiting to claim **2** and are thus also allowable over the prior art of record.

Regarding claim **3**, the closest prior art, *Yanagimachi et al.* (U.S. 3,936,595), teaches a system for distribution of programming to a subscribing receiver device, where control signaling is provided from the transmitter end to the receiver end such that desired programming may be extracted from a program stream by the receiver in a desired sequence for subsequent display to a subscriber.

However, *Yanagimachi et al.* as well as the other prior art of record fails to teach "generating a control portion of said message stream at said transmission station that is effective at a receiver station to cause said first control processor to select portions of said message stream that control said control processor and said remainder of said plurality of processors to perform different functions comprising (i) processing television

programming and (ii) controlling the timing of communicating said television programming" in combination with the other limitations of claim 3.

Regarding claims **41, 42, 47, and 48**, these claims are further limiting to claim **3** and are thus also allowable over the prior art of record.

Amended independent claims **4, 131, and 134** are similarly allowable over the prior art of record, as they now each contain the above distinct features present in claim **2**.

Regarding claims **132 and 133**, these claims are further limiting to claim **131** and are thus also allowable over the prior art of record.

Regarding claim **56**, the closest prior art, *Rumreich* (U.S. 4,670,904), teaches a system for processing of a scrambled video signal, where a decode authorization circuit of a subscriber decoder stores a unique subscriber code which is compared to a subscriber authorization code transmitted during a horizontal line of the vertical interval of the broadcast television signal. If a favorable comparison (match) is obtained, the decoder is enabled for processing of the corresponding television programming signal.

However, *Rumreich* as well as the other prior art of record fails to teach "comparing stored function invoking data to the contents of said at least one register memory; inputting said digital television signals to said plurality of processors on the basis of one or more matches" and "processing of said digital television signals simultaneously at two or more of said plurality of processors" in combination with the other limitations of claim **56**.

Amended independent claims **57 and 58** are similarly allowable over the prior art of record, as they now each contain the above distinct features present in claim **56**.

Regarding claims **59-66 and 80-85**, these claims are further limiting to claim **56** and are thus also allowable over the prior art of record.

Regarding claims **86-89, 96, and 97**, these claims are further limiting to claim **57** and are thus also allowable over the prior art of record.

Independent claims **67 and 72** are similarly allowable over the prior art of record, as they each contain the above distinct features present in claim **56**.

Regarding claims **68-71**, these claims are further limiting to claim **67** and are thus also allowable over the prior art of record.

Regarding claims **73-79**, these claims are further limiting to claim **72** and are thus also allowable over the prior art of record.

Regarding claim **106**, the closest prior art, *Christensen et al.* (U.S. 4,271,468), teaches a multiprocessor system for the handling of channel interrupts, where I/O devices generate interrupt signals that are sent to a channel controller 24 (control processor) and cause the generation of interrupt commands that identify a particular queue used for posting of an entry needing processing. *Christensen et al.* also teaches where the contents of a PND register (flag memory) are used to control the order in which entries in the queues get processed.

Brennand et al. (U.S. 4,744,080), teaches an apparatus for receiving and recovering digital sound and data where multiple processors are utilized for the recovery process.

However, *Christensen et al.*, *Brennand et al.*, as well as the other prior art of record fails to teach "outputting selected portions of said message to said plurality of processors" and "processing said selected portions simultaneously" in combination with the other limitations of claim **106**.

Amended independent claims **107 and 108** are similarly allowable over the prior art of record, as they now each contain the above distinct features present in claim **106**.

Independent claim **109** is similarly allowable over the prior art of record, as it contains the above distinct features present in claim **106**.

Regarding claims **110-116 and 118-128**, these claims are further limiting to claim **109** and are thus also allowable over the prior art of record.

Independent claim **129** is similarly allowable over the prior art of record, as it contains the above distinct features present in claim **106**.

Regarding claim **130**, this claim is further limiting to claim **129** and is thus also allowable over the prior art of record.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL J. MOORE, JR., whose telephone number is (571)272-3168. The examiner can normally be reached on Monday-Friday (7:30am - 4:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor William Korzuch can be reached at (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J. Moore, Jr./
Primary Examiner, Art Unit 2467